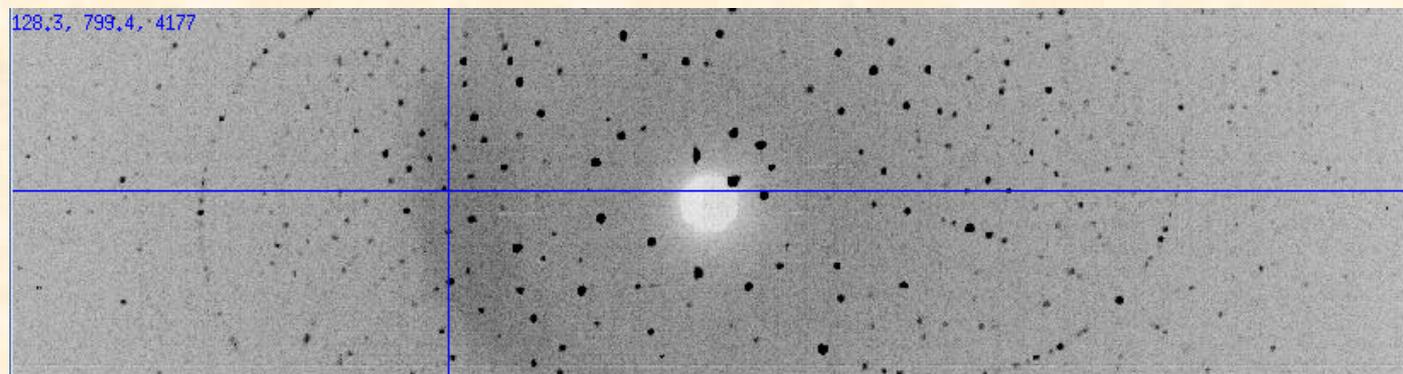


Neutron Structural Biology – September 2002

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- Several historic firsts occurred during neutron diffraction experiments at the Protein Crystallography Station (PCS), Los Alamos Neutron Science Center (LANSCE).
 - We were the first external user experiment on the PCS.
 - We collected the first time-of-flight neutron diffraction from an enzyme.
 - The enzyme is the largest biological molecule (Mw ~43kDa) studied so far at high resolution using neutron diffraction.
 - The unit cell is ~ 100 Å in each dimension.
 - The diffraction extends to ~ 1.1 Å resolution with $I/\sqrt{I} \sim 30$.
 - The unit cell orientation matrix was obtained and data integrated.



Pseudo-laue neutron-diffraction image from a crystal of D-xylose isomerase